

WasteCap of Massachusetts Site Visit Report:
Massachusetts Department of Mental Retardation
Templeton Developmental Center, Baldwinville

Developed by WasteCap of Massachusetts
for the Massachusetts Department of Mental Retardation

Site Visit Conducted on June 10, 2003

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INTRODUCTION AND BACKGROUND

WasteCap of Massachusetts contracted with the State Sustainability Program at the Massachusetts Executive Office of Environmental Affairs and the Department of Environmental Protection to perform a site visit for the following facility:

Site:

Massachusetts Department of Mental Retardation
Templeton Development Center
212 Freight Shed Road
Baldwinville, MA 01436

Contacts:

Stella Smith, Director of Maintenance Department
Kenneth Case, Maintenance Foreman
978-939-2161

Site visit date:

June 10, 2003

The purpose of the site visit was to review the Department of Mental Retardation's current waste management practices at the Templeton Developmental Center facility, and identify specific ways to reduce waste, improve environmental performance, and cut costs.

Facility Information

The Templeton Developmental Center is a state-operated facility consisting of 53 buildings on a 2,600 acre site. A majority of the campus serves as a residential facility for the mentally disabled, which includes housing and dining/food preparation areas. The campus also includes administrative office buildings, facility operation buildings, a working farm, and redemption center.

There are 13 full time and 2 part time maintenance staff.

The Templeton facility currently recycles a range of materials, summarized in the chart on page four.

General Benefits of Recycling

The staff at Templeton clearly understand and experience the benefits of recycling. To summarize, recycling turns materials that would otherwise become waste into valuable resources and generates a host of environmental, financial, and social benefits. Major benefits include:

- **Cost Savings**
 - Recycling saves money by diverting materials from the trash, thereby reducing trash collection and disposal fees.
 - The price per ton to divert recyclables like paper, cardboard, organics, and scrap metal is usually less than it is for conventional trash disposal in landfills or incinerators.
- **Comply with Regulations and Executive Orders**

There are a number of regulations and an executive order relating to waste management procedures that state agencies should be in compliance with.

 - **Waste Bans -**

"Waste bans" are restrictions on the disposal and transfer for disposal of certain hazardous and recyclable items at solid waste facilities in Massachusetts. Banned materials include paper;

cardboard; glass, metal, and plastic containers; leaves and yard waste; batteries; white goods (appliances); whole tires; and cathode ray tubes. For more information visit <http://www.state.ma.us/dep/recycle/files/wstban01.doc> (Also see Appendix 4)

- Massachusetts Universal Waste Rule -
Universal wastes are specific hazardous wastes such as batteries, mercury containing products like thermostats and fluorescent lamps, and other materials that are commonly generated by households, businesses, and industries that are subject to streamlined environmental regulations. Universal wastes must be stored in a separate area marked as a Universal Waste accumulation area. Containers of universal wastes or individual universal waste items must be labeled as Universal Waste, with the name of the waste, e.g., Universal Wastes - Thermostats. Additional handling requirements depend on the type of waste. Disposal of universal wastes as solid waste is prohibited. Generators also are prohibited from accumulating universal wastes for longer than one year, unless the generator can prove that the activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment or disposal by a licensed vendor. For more information visit <http://www.state.ma.us/dep/recycle/files/univrule.doc>
- State Sustainability Executive Order No.438 -
Executive Order 438, issued in July of 2002, calls on all state agencies to establish sustainability goals, initiate long-term sustainability planning, and implement sustainable practices at state facilities. The Order established a State Sustainability Program, staffed at the Executive Office of Environmental Affairs, which assists agencies in meeting the goals of the Order, including agency plans, environmental initiatives, and tracking and reporting.


With regard to solid waste, the Order calls on agencies to meet the 70% waste reduction goal established by the EOEA/DEP Beyond 2000 Solid Waste Master Plan by 2010. Implementing the recommendations in this report will help the DMR Templeton facility move toward meeting the requirements of Executive Order No. 438.

• **Improve the Environment**

Recycling benefits the environment in a number of ways:

- Conserving Natural Resources -
By substituting scrap materials for the use of trees, metal ores, and other virgin materials, recycling reduces the need to expand forestry and mining operations.
- Saving Energy -
Because recycled materials have already been processed once, it takes less energy to process new products with recycled material than virgin materials.
- Reducing Green House Emissions -
Much of the energy used in industrial processes and in transportation of materials involves burning fossil fuels like gasoline, diesel, and coal, which are sources of greenhouse gas emissions. By saving energy, recycling also reduces the amount of greenhouse gasses being generated by these processes

Using recycled vs. virgin materials to make new products saves a tremendous amount of energy and dramatically reduces harmful emissions. The following chart illustrates the benefits of using recycled vs. virgin pulp for paper alone:

	60% energy savings (Center for Ecological Technology)	95% less air pollution; each ton saves 60 lbs. of air pollution (Center for Ecological Technology)	Recycling of each ton of paper saves 17 trees and 7000 gallons of water (EPA)
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- **Sustain Local Industries and Jobs**

Many of the recyclable materials generated in Massachusetts are processed to some degree in the state, and some are manufactured into new products here as well, creating jobs and economic benefits. According to a study co-sponsored by the Chelsea Center for Recycling and Economic Development, the economic activity generated by the recycling and reuse industry in Massachusetts is significant. Highlights include:

- 1,437 recycling and reuse establishments.
- 19,445 employed in recycling and re-use industries.
- \$557 million in annual payroll.
- \$3.58 billion in annual revenues.

Current Program Overview

The Templeton facility is doing a very comprehensive job of recycling, while providing its clients with valuable jobs. The center has an operating sawmill to produce lumber, and sawdust is used as cattle bedding and then composted. Steel is reused and then whatever is not used is recycled. The Center has a non-profit arm, Templeton Center Enterprises, that runs a recycling center which employs clients of the facility and accepts bottles, cans, paper, and corrugated cardboard. The bottle and can program is open to the public and redeems "bottle bill" materials; the paper and cardboard operations only handle material generated at Templeton. Paper is collected in bins around the DMR facility and transported to the redemption center where it is stored until there is a large enough load to truck to the Orange transfer station for recycling. There is a small monthly permit fee at the transfer station for the paper. The table below summarizes these and other recycling activities at Templeton.

Contract	Payment Structure	CY2000 Contract Cost	Tons or Volume Managed	Cost per Ton
Cardboard	\$407 monthly charge (2-10 yd containers, 2xs/week)	\$4,884	*	*
Paper - Mixed	Permit fee; Center brings it to the transfer station	\$360**		
Paper - White	Permit fee; Center brings it to the transfer station			
Deposit Bottles & Cans	Center owns and operates redemption center. Receives \$0.0225/can or bottle. Storage cost of \$200/mo/trailer (2 trailers)	-\$13,200	800,000 cans/bottles (18,000 generated internally)	
Non-deposit Containers	None; Center brings non-deposit glass and metal containers to landfill 2xs/mo (4-30 gallon buckets)	\$0	2880 gal	
Organics	None; composted and used on site	\$0		
Fluorescent Lamps	Boxed and picked up yearly	\$347	95 bulbs, 1 ballast	
Computers	Sold on State vendor list or private parties/parts	\$0		
Batteries	None; Center brings batteries to recycling service provider	\$0		
Scrap Metal	None; Center brings scrap metal to recycling service provider	\$0	6 tons	0
Wood	None; ground for sawdust or used as kindling	\$0		
Biosolids	Quarterly pickup (\$715.00/mo)	\$8,580	131,000 gal	
Construction Debris	\$90/ton disposal fee. Center brings debris to landfill	\$270	3 tons	90
Cow Manure	None; used on site	\$0	90 yds	
Trash	6 dumpsters, 2 xs/week; \$3280/mo	\$39,360		
Totals		\$40,241		

*** Annual cost of landfill permit. Cost not reflected in other materials going to the landfill.*

** Flat fee charged; emptied by front load trash truck; not weighed.*

Summary of Major Recommendations

Templeton is truly a model for public and private facilities in the state. However, WasteCap offers several recommendations for improving the program. All of these efforts can be accomplished in the short term.

- Contact Erving Paper for a better price on mixed paper
- Place additional paper bins in high use areas
- Increase efficiency of cardboard storage
- Increase bottle and can recovery
- Monitor dumpsters, review contracts, obtain price quotes
- Establish a comprehensive recycling education program.

These recommendations are outlined in the following pages.

CONTACT ERVING PAPER FOR BETTER PRICE ON MIXED PAPER

Current Paper Recycling Program:

Mixed paper and white paper are separately collected from the center's buildings by residents/maintenance staff and taken to the redemption center. The facility stores the paper until there is enough to take to market. DMR uses their trucks to take any shredded paper to Holyoke, over an hour away, and other paper is taken to the Orange Transfer Station recycling facility, 22 miles away.

Specific Recommendations:

WasteCap suggests that Templeton contact Erving Paper mill in Erving, Massachusetts about accepting Templeton's sorted mixed office paper. Erving Paper will pay Templeton approximately \$60.00 to \$80.00 per ton for the material. Using Erving Paper, instead of the Orange and Holyoke transfer facilities, will be less costly (lower transportation costs) and will generate higher revenues.

Erving's contact information (see box) was passed on to Kenneth Case who gave it to David Caswell, manager of Templeton's redemption center. At last contact WasteCap had with Templeton, Caswell expressed a lack of interest. WasteCap strongly suggests that Templeton contact Erving as soon as possible.

Erving Paper Mill

Contact: Phil Lepore
413.422.2700 x271

Will pay approx. \$60 - 80
per ton of sorted mixed office paper

PLACE ADDITIONAL PAPER BINS IN HIGH USE AREAS

While touring the administrative offices of the facility, WasteCap staff noticed a lack of paper recycling bins adjacent to copy machines. Placing bins near copy machines will greatly improve the amount of waste paper being recycled.

For a list of recycling container vendors on the State contract see Appendix 2.



Recycling bins should be placed close to these copy machines, which are located in one of the administrative offices.

General Office Paper Recycling Tips:

- Office paper usually comprises greater than 80% of office trash, so make your recycling program as or more convenient than the trash collection program.
- Recycle as many types of office paper as possible - the market for mixed office paper is good and is expected to remain so into the foreseeable future. Work with your vendor to include colored and white paper, newspapers, magazines, junk mail, envelopes, and post-it notes in your program
- Establish a uniform color-coded container system so that people can recognize and differentiate trash containers from recycling containers.
- Provide color-coded, clearly labeled recycling containers (usually 14 quart blue bins), within arm's reach of every desk, workstation, classroom, and conference room.
- Post clear and concise recycling guidelines adjacent to all recycling containers and on your internal website; send emails to staff and clients periodically telling them of the successes as well as areas for improvement.
- Consider purchasing wheeled recycling carts (64 gallon carts work well) for bulk collection of recyclable paper rather than leasing them from vendors. The payback period is short and they are a good investment. Be sure to purchase containers that are compatible with your recycling vendor's equipment.
- Work closely with your recycling vendor regarding which materials are accepted and prohibited.
- Obtain service and price quotes from other vendors on an annual basis to ensure you are recycling as many materials as possible at the best rates available. However, do not switch vendors regularly based solely on price—service is equally important, as is developing a relationship with your vendor to make sure they stick with you when recycling market conditions are good and bad.
- Designate an internal recycling manager or managers. Include their name and contact information on all posters, recycling containers, and program information.
- Recycling office paper reduces your environmental liability because recyclable paper is prohibited from disposal in landfills and incinerators through the Massachusetts Waste Ban regulations (visit <http://www.state.ma.us/dep/recycle/files/wstban01.doc>)

Remember - recycling more paper enables you to avoid trash disposal costs and helps you save \$\$.

INCREASE EFFICIENCY OF CARDBOARD STORAGE

Current Cardboard Recycling Program:

Waste Management collects cardboard from two ten yard dumpsters twice a week at a cost of \$407/month.

Specific Recommendations:

Because cardboard has a market value, it is significantly less expensive than trash to remove.

To maximize the amount of dumpster space and minimize contamination, Templeton should request that Waste Management replace the current dumpsters with locked and slotted dumpsters. The slot will force staff to break down boxes before sliding them into the locked container, thus increasing collection efficiency for Waste Management, and will also prevent the dumpster from being filled with trash. Templeton should also request that the dumpsters be labeled “cardboard only”. Waste Management should be able to accommodate the DMR on both requests. See the image below, right for an example.

An alternative option is to install a cardboard compactor. Templeton may want to run electrical service from the Recycling Center bungalow to a 40 cubic yard cardboard compactor. A compactor will maximize the amount of cardboard shipped in each load, requiring less frequent pulls thus reducing hauling costs. Even though the rental fee may be more for a compactor than a 10yd dumpster, it will take the place of both current dumpsters and hold more than twice as much.

The total cost of using a 40-yard cubic yard compactor should be less than two 10 cubic yard dumpsters. If Templeton decides to continue using two 10 cubic yard dumpsters, this service should be rebid, as the current rate appears high.

Current Recycling Program		
Container Type	Pickup Type	Cost
two 10-yard dumpsters	Every Tuesday and Friday	\$407.00/month



**Current cardboard dumpsters
used at Templeton**



**Example of a locked and slotted
cardboard dumpster**

General Cardboard Recycling Tips:

- Recycle cardboard whenever possible - recycling costs less than throwing it away, and cardboard takes up a significant amount of space in your trash dumpster.
- Insist that your vendor clearly labels your dumpsters “Recycled Cardboard Only.”
- To minimize the number of pickups or hauls required, maximize the size of the cardboard dumpster used and encourage staff to flatten cardboard.
- Explore the possibility of changing your contract from an automatic pickup contract (e.g. 2 times/week) to an “on-call” contract where your staff calls for a pickup or haul only when the cardboard recycling container is full.
- Recycling cardboard reduces your environmental liability because cardboard is prohibited from disposal in landfills and incinerators through the Massachusetts Waste Ban regulations (visit <http://www.state.ma.us/dep/recycle/files/wstban01.doc>).
- If you are using a dumpster, insist that your vendor provides one that is lockable and is equipped with a slot. These features will ensure the cardboard is flattened and contamination is kept to a minimum
- Obtain service and price quotes from other vendors on an annual basis to ensure you are recycling as many materials as possible at the best rates available. However, do not switch vendors regularly based solely on price—service is equally important, as is developing a relationship with your vendor to make sure they stick with you when recycling market conditions are good and bad.

Remember - Recycling cardboard enables you to avoid trash disposal costs and helps you save \$\$.

INCREASE BOTTLE AND CAN RECOVERY

Current Bottle and Can Recycling Program:

The Templeton Development Center is unique in that it operates its own redemption center that is used by the facility as well as the local community. Because of the operation of the redemption center, Templeton is able to bring in income from beverage distributors of \$18,000.00/yr (~800,000 bottles/yr @ \$0.0225/bottle)

Templeton rents two trailers to store the deposit containers at \$200.00/month each-- costing \$4,800.00/year. Non-deposit containers, such as water bottles and #10 food cans from the kitchen containers are recycled at the Orange transfer station for \$30.00 per month (sticker cost)--costing \$360.00/year. Thus, the net income per year is equal to \$12,840.00. This figure does not include the cost of hired help (resident help) or transportation costs to the Orange transfer center.

Specific Recommendations:

This is an excellent program that seems to be working well for Templeton. However, bottles are still ending up in the garbage.

To increase the amount of bottles recycled on the facility grounds, Templeton could purchase "Slim Jim" containers with restrictive lids as noted above and place them in high traffic areas where typical bottle waste will accumulate--Cafeterias, office spaces, food preparation areas, etc.



General Bottle and Can Recycling Tips:

- Consider purchasing wheeled recycling carts (96 gallon carts work well) for bulk collection of recyclable bottles and cans rather than leasing them from vendors. The payback period is short and they are a good investment. Be sure to purchase containers that are compatible with your recycling vendor's equipment.
- Search for a vendor that recycles co-mingled (mixed) plastic, glass, tin, and aluminum containers. This method is far easier than recycling the various materials separately.
- Work closely with your recycling vendor to determine which materials are accepted and prohibited and to design the best collection system.
- Obtain service and price quotes from other state contract vendors on an annual basis to ensure you are recycling as many materials as possible at the best rates available.
- Post clear and concise recycling guidelines adjacent to all recycling containers and on your company's website.
- Designate a recycling manager or managers and include their name(s) and contact information on all posters, recycling containers, and program information.
- Establish a uniform color-coded container system so that people can recognize and differentiate trash containers from recycling containers.

Remember - recycling bottles and cans enables you to avoid trash disposal costs and helps you save \$\$.

ESTABLISH A COMPREHENSIVE RECYCLING EDUCATION PROGRAM

Templeton has an excellent recycling program that should be a model for other state agencies. However, more can be done to educate residents and staff about the programs already in place. Educating the users of a program is critical in ensuring any recycling program's success. If this aspect of the program is not implemented, the recycling program will not reach its full potential, and vendors may reject materials due to contamination, thus creating extra costs and reducing participant's interest in the program. The best way to ensure a successful program is to educate the staff and residents by explaining what is recyclable, where it can be recycled, why it is important to recycle, and who can answer questions about the recycling program.

Signage

Occupants must see clear, visible signs promoting the recycling program. Signs should be placed in high visibility areas such as bulletin boards, on or near recycling bins, near copy machines, in cafeterias (tri-fold table tents work well), and on the web (see the "Website" section below for details).

List what can be recycled and where it can be placed. Be sure to leave contact information for participants to ask questions or to report a problem. Information explaining your recycling program should also be included as part of the orientation for new employees.

To avoid contamination make sure all recycling bins and dumpsters are properly labeled.

Recycling Coordinators (Green Team)

Establish a network of volunteer recycling coordinators from each department or building, including program residents. These networks have been proven to increase recycle rates and reduce costs. Many organizations have found that employees, as well as other program users, provide creative ideas to improve waste-handling practices. Management can make them feel comfortable and encourage them to come forward with ideas through the use of these networks.

By creating a network of coordinators you will develop a sense of program "ownership". These people will become your liaisons for distributing educational materials, and assist in the enforcement of their recycling programs.

Include representatives from the custodial work force in the network - you will find that many custodial staff take pride in the recycling efforts. They are also the people that deal with the program first-hand and probably know its strengths and weaknesses better than anyone.

Meet with the coordinators two to four times a year to discuss your recycling program. Use these meetings to share ideas to improve, expand, and sustain the program. Provide food at the meetings! It really helps increase attendance and participation.

Website

If DMR has an intranet, create a section on there that outlines the recycling program. This can also be place on the regular web site where others can see it. This section should contain guidelines and statistics that inform your staff and visitors about materials that can be recycled, where they should be placed, updates, statistics, and who to contact if they have questions about your recycling program.

By establishing a recycling section on your website, you will be providing an updateable resource for staff to print out anytime. The Web is also a great way to show visitors and the local community that your company is doing its part to improve the environment.

The address of your Website recycling section should be included on all recycling program educational materials.

Kick-off Memo

A letter signed by upper management and sent to company staff highlighting the benefits of the recycling program is an excellent way to jumpstart and enhance your program.

Reinforcement and Follow-up

It is important to reinforce the new recycling culture in your company. Keep residents and employees informed of recycling efforts by highlighting participation rates, quantities of recycled material collected, revenue earned, disposal cost savings, and any problems encountered and/or solved in company memos or newsletters. Continuously seek suggestions for improving your program from your staff. Use any program revenue to reinforce the program, through awards, rewards or other incentives.

Join the Race to Recycle

Participate in the Race-to-Recycle program. The race-to-Recycle is an annual competition open to all businesses and institutions in Massachusetts. The contest evaluates and awards participants based on their recycling and waste reduction efforts, placing an emphasis on recycling percentages.

The race also offers networking and educational programs throughout the year. Quarterly workshops for race participants will bring them together with speakers and WasteCap staff to share ideas, gain insight, and increase recycling percentages. The Race could be a tremendous opportunity to help boost the recycling program. For information about the race and to sign up, visit www.racetorecycle.org.

Join the US EPA WasteWise Program

WasteWise is a free, voluntary, US Environmental Protection Agency (EPA) program through which organizations eliminate costly solid waste, benefiting their bottom line and the environment. Members set feasible and cost-effective waste management goals for their organization.

WasteWise provides free technical assistance to help your company develop, implement, and measure waste reduction activities. WasteWise offers publicity for organizations that are successful in reducing waste through EPA publications, case studies, and national and regional events. These events also provide networking opportunities for organizations to share waste reduction ideas and success stories.

(See Appendix 5 for more information.)

MONITOR DUMPSTERS, REVIEW CONTRACTS, OBTAIN PRICE QUOTES

Current Waste Hauling Situation

Templeton is charged a flat rate for solid waste disposal, with six dumpsters being removed twice a week.

Specific recommendations:

WasteCap recommends that Templeton staff monitor the amount of waste entering the dumpsters. You may find that some dumpsters do not need to be emptied as often as they currently are. Reducing the number of times Waste Management comes to empty your dumpsters will reduce your waste disposal costs. See the "Tracking Recycling Statistics" section.

WasteCap also highly recommends that Templeton review its waste contracts and obtain price quotes from other vendors on an annual or bi-annual basis to ensure you are receiving competitive rates. A list of recycling service vendors that are on the State contract has been included with this report (*See Appendix 1*).

General Tips:

- Monitor the amount of trash going into your dumpster and adjust the frequency of pickups or hauls by your vendor accordingly - often trash containers are being picked up or hauled when they are only partially full.
- To minimize the number of pickups or hauls required, maximize the size of the trash dumpster or compactor used.
- Explore the possibility of changing your contract from an automatic pickup contract (e.g. 2 times/week) to an "on-call" contract where your staff calls for a pickup or haul only when the trash container is full.
- If you are using a compactor, make sure the vendor installs a pressure guage and provides you with the maximum pressure level allowed. Call for a haul only when the pressure is at or near this level, minimizing the number of hauls required.
- Obtain service and price quotes from other vendors on an annual basis to ensure you are recycling as many materials as possible at the best rates available.
- Insist that your vendor clearly labels your dumpsters and compactors "Trash Only".
- Recycling will decrease the amount of trash and further reduce the number of pickups or hauls required.

Remember less pickups or hauls = lower costs.

TRACKING RECYCLING STATISTICS

It is important to track your recycling and trash statistics on a regular basis. Templeton currently does not do this. Maintaining accurate and consistent records including the types and quantities of materials recycled and disposed of in your program provides the basis for making informed decisions about future program modifications and enhancements.

- **Gauge Program Progress**
Tracking your waste reduction efforts will provide a consistent means to accurately measure and track the program progress over time and most importantly, it will help determine if your program is cost effective.
- **Address Waste Reduction Goals**
Accurately tracking your waste and recycling percentages will give DMR the knowledge needed to set firm waste reduction goals.
- **Educate the Staff**
Information gathered from measuring and tracking recyclables and trash quantities is very valuable in educating your staff about the positive impacts of your program and sustaining the program.

Tracking Methods

The best way to track your recycling program's progress is to develop an electronic spreadsheet based on a monthly timeline which compares this year's recycling and trash totals to the previous year's totals. You can obtain this data from your trash and recycling service providers, and the information you need is often provided on monthly vendor invoices. Sample spreadsheet formats are provided below:

Z Corp Recycling Statistics

Commodity	Tons Generated									
	January		February		March		...	Year to Date Totals		
	FY03	FY04	FY03	FY04	FY03	FY04		FY03	FY04	% Change
Mixed paper										
Cardboard										
Bottles and Cans										
Scrap metal										
Total recyclables										
Trash										
Total recyclables and trash										

Commodity	Cost/Revenue									
	January		February		March		...	Year to Date Totals		
	FY03	FY04	FY03	FY04	FY03	FY04		FY03	FY04	% Change
Mixed paper										
Cardboard										
Bottles and Cans										
Scrap metal										
Total recyclables										
Trash										
Total recyclables and trash										

RESTRUCTURING EXISTING CONTRACTS

There are many ways to restructure your existing contract and reduce your waste disposal costs. Two methods are reviewed in this section.

Analyzing the number of Pulls or Dumps Required

Many times dumpsters or roll off containers are emptied too frequently, resulting high trash disposal and recycling costs. You should monitor the how full the recycling and trash containers are immediately before each time they are emptied. Create a weekly spreadsheet, which includes inspection times (the day that the dumpster or roll off container is to be emptied), as well as boxes indicating how full the container is at the time of inspection. You can use simple terminology such as “empty”, “¼ full”, “full”, etc. By reviewing this tracking sheet over time, it will help you gauge the amount of times the container actually needs to be emptied. You may discover that the container needs to be emptied much less often —and that will translate into cost savings.

Example:

	% full on recycling or disposal day					Average % of total volume full/week
	Mon	Tue	Wed	Thu	Fri	
Date	10/6	10/7	10/8	10/9	10/10	
Dumpster, Building A - Mixed office paper (5 x week)	25%	25%	50%	25%	25%	30%
Roll off Building B – Trash (3 x week)	50%		50%		100%	67%

Resource Management

The Massachusetts Department of Environmental Protection’s preferred method of contracting for waste management services is called resource management. Unlike traditional solid waste service contracts, resource management (RM) compensates waste contractors based on performance in achieving your organization’s waste reduction goals rather than the volume of waste disposed. As a result, RM aligns waste contractor incentives with your own goals as you both explore innovative approaches that foster cost-effective resource efficiency through prevention, recycling, and recovery.

Coined by General Motors Corporation (GM), RM was a logical outgrowth to its success with performance-based contracting in the area of chemical purchasing, use, and management. GM adopted RM in response to an internal waste reduction goal and the recognition that existing hauling and disposal contracts limited waste reduction efforts across its more than 70 North American facilities. GM’s objective in executing RM contracts was to “provide a systems approach to resource efficiency that motivates cost reduction and conservation of plant resources.”

Research to date demonstrates that RM is widely applicable in business, institutional, and municipal settings. Because many organizations rely on disposal contracts and some already use performance-based contracting practices, RM might be a useful model for your organization.

For more information about RM, please visit the Massachusetts DEP’s RM web site at <http://www.state.ma.us/dep/recycle/files/rm/rmcontr.htm>.